

## Issue: Relative Potential Benefit to Sustainable Forest-Based Wood Products Markets

### The intent of this issue is to:

- Identify the forested areas most beneficial to existing and planned mills and biomass utilization facilities.

**Discussion:** In many areas of the state, communities are economically and culturally dependent upon forestlands. The benefits and products of forestlands include timber, biomass, recreation, hunting/fishing and ecosystem services. Initially, the multi-resource committee and State Assessment of Forest Resources (SAFR) Stakeholder group identified the loss of forest infrastructure (mills, markets, etc.) as a key issue (threat to forests). This threat is greater than simply economics. When markets and mills shut down, incentives to manage forests are significantly diminished, leading to an increase in forest insect and disease problems, fire risk, and a decline in overall forest health.

However, the core team felt that if markets and infrastructure were already gone, it will be very difficult to resurrect them, especially within the changing world economy. Rather, the team felt it better to regard the economic potential of forests as a benefit, and focus on where markets and mills currently exist and additional markets, such as for biomass, are being planned. As communities continue to grow, there is value to considering how this can be accomplished sustainably. That is, producing the food, energy and other resources necessary to support these populations within a set distance surrounding the community.

Drivers, such as the difficulty of Federal lands forest management, were discussed. Various ways to measure this were also discussed (such as amount of litigation in various areas), but the challenge of finding this information and developing datasets to express this is beyond the parameters of this project.

One of the more important datasets to consider is the location of current mills, and existing and planned biomass facilities. Areas that are in close enough proximity to feed these markets will be higher priority for projects. Additionally, forest productivity was also discussed at length. Currently, no dataset exists for productivity across the whole state. The team discussed alternative ways to estimate this. One is to simply use vegetation layer as a surrogate for habitat type. While this doesn't measure potential habitat, it may be all we have to work with.

## Data used:

- 1) **Mill travel Distance:** This layer was developed using known mill locations and the time needed to haul timber to them (provided by IDL's Forest Management Bureau). The mills were divided into two categories based on their raw resource needs and production capabilities, then a cost distance analysis performed using a travel time surface layer. The resulting layer was then stratified into the travel time categories of ½ hr, 1 hr, 2 hr, 3 hr, and 4 or more. Note that mills outside of Idaho but within the travel buffer distances were also included. For small mills, we only looked at ½ hour and 1-hour travel times.
- 2) **Woody Biomass Facilities Travel Distance:** This layer used point locations for known and proposed biomass facilities and the time needed to deliver woody biomass to them. The facilities were divided into two categories based on their operational times and raw resource needs, then a cost distance analysis performed using a travel time surface layer. The resulting layer was then stratified into the travel time categories of ½ hr, 1 hr, 2 hr, 3 hr, and 4 or more. For small facilities, we only looked at ½ hour and 1-hour travel times.
- 3) **Forested Areas:** The National Land Cover Dataset 2001, produced through a cooperative project conducted by the Multi-Resolution Land Characteristics (MRLC) Consortium, a partnership of federal agencies ([www.mrlc.gov](http://www.mrlc.gov)). For a detailed definition and discussion on MRLC and the NLCD 2001 products, refer to <http://www.mrlc.gov/mrlc2k.asp>. Within this dataset are classifications of land cover, including forested areas. For this issue, the following classifications were used: Deciduous Forest, Evergreen Forest, Mixed Forest, Shrub/Scrub, Woody Wetlands, Palustrine Forested Wetlands, Palustrine Scrub/Shrub Wetlands, and Estuarine Forested Wetlands.

**Issue Process—Draft Three:** A number of attendees at the 26-Aug-98 stakeholder meeting pointed out areas around mills that appear to be missing from the map. IDL staff subsequently reviewed the data and found errors due to a miscommunication of what was desired for this. This was corrected, so the new map reflects these corrections and the process described below.

**Issue Process—Draft One (old):** The composite layer shows a high timber priority close to mill and biomass facilities with diminishing priority as timber is further from mills or biomass facilities. Large mills and large biomass facilities were the basis of a time travel classification. Small mills and biomass facilities were used for only ½ and 1-hour travel distance indicating their influence is limited and smaller than the large facilities. The Mill distance layer and the biomass facilities layer were combined to create a composite layer such that the value

for each cell was equal to the highest value in any of the datasets. This data was masked such that only the forested areas described in #3 above are shown.

### **Data Considered, but not used:**

Early on, the intent of this issue was in determining in what areas a lack of (or decline of) mill infrastructure or markets most threaten local economies, overall forest management, forest health, etc. As mentioned in the discussion above, the Core Guidance Team instead chose to focus on beneficial aspects of forest-based markets, identifying the forested areas that support them. Projects that promote forest health and good forest management within these areas will help develop or maintain supply.

Significant discussion revolved around the desire to incorporate forest productivity data to determine the best areas in which to work once the cost-distance analysis for mill and woody biomass facilities was complete. While this information exists, it is not inclusive of the entire state. The Core Team felt it important to use consistent statewide data to ensure relative prioritization weighed all areas against the same data. The team also considered USDA Natural Resource Conservation Service soils data, but this information is only available county by county, and the effort necessary to combine these was beyond the guidance of using the “best available existing data.” The group identified forest productivity as a significant data gap that would be very beneficial to have in the future. The group did consider using an above ground biomass dataset as a surrogate for productivity, but these identified substantially the same areas as the forested classifications of the NLDC 2001 data used in this analysis.

The Core Guidance Team also discussed incorporating other economic benefits from forestlands, such as recreation, hunting and fishing, esthetics, ecosystem services, etc. Ultimately, it was felt that these were covered within the other issues and that this one should focus on timber and woody biomass based market